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GEOGRAPHICAL NOTES.

BY

GEO. C. HURLBUT, *Librarian.*

THE SIXTH INTERNATIONAL GEOGRAPHICAL CONGRESS, LONDON, 1895.—The following notice was received in October:

PRELIMINARY NOTICE.

1 SAVILE ROW, BURLINGTON GARDENS,
LONDON W., JULY, 1892.

At the conclusion of the Fifth International Geographical Congress, held at Bern in 1891, a unanimous wish was expressed that the next Congress should be held in London. An intimation of this desire was conveyed by Dr. Gobat, the President of the Bern Congress, to the President and Council of the Royal Geographical Society, with the request that they would undertake to make the necessary arrangements.

The Council of the Society agreed to nominate an Organizing Committee for the purpose of taking all preliminary steps to ensure a successful meeting. The names of the members of the Committee are given overleaf. This Committee, after due deliberation, has decided that the Congress shall meet in the month of June in the year 1895.

It is considered desirable to send out this preliminary intimation at this early date, in order to give ample time for preparation both for the Congress and the accompanying Exhibition. In about a year it is hoped that the Committee will be in a position to issue a more detailed programme, and in the meantime suggestions would be gladly received, addressed to the Secretary.

LEONARD DARWIN,
Chairman of Committee.

J. SCOTT KELTIE, *Secretary.*

LIST OF THE ORGANISING COMMITTEE OF THE SIXTH
INTERNATIONAL GEOGRAPHICAL CONGRESS,
LONDON, JUNE, 1895.

Major LEONARD DARWIN, M.P., *Chairman.*

Rt. Hon. Sir MOUNTSTUART E. GRANT DUFF, G.C.S.I., &c., *President R.G.S.*

DOUGLAS W. FRESHFIELD, } *Honorary Secretaries R.G.S.*
 HENRY SEEBOHM, }
 Rt. Hon. Sir GEORGE F. BOWEN, G.C.M.G., &c.
 Colonel Sir CHARLES W. WILSON, R.E., K.C.B., F.R.S., &c.
 General J. T. WALKER, C.B., R.E., F.R.S.
 CLEMENTS R. MARKHAM, C.B., F.R.S.
 Dr. R. N. CUST.
 E. DELMAR MORGAN.
 CUTHBERT E. PEEK, F.R.A.S.
 HALFORD J. MACKINDER, M.A.
 J. Y. BUCHANAN.
 J. SCOTT KELTIE, *Secretary.*

The above have been appointed by the Council of the R.G.S.

Also,

Sir FREDERICK A. ABEL, K.C.B., F.R.S., *Representative of the Imperial Institute.*
 Sir HENRY BARKLY, G.C.M.G., K.C.B., F.R.S., *Representative of the Royal Colonial Institute.*
 FAITHFULL BEGG, *Representative of the Royal Scottish Geographical Society.*
 General J. F. D. DONNELLY, C.B., R.E., *Representative of the Society of Arts.*
 Rev. T. W. SHARPE, *Representative of the Education Department.*

ARCHÆOLOGICAL SURVEY OF EGYPT.—Attention is called to the following letter from the Vice-President of the Egypt Exploration Fund :

“ The Egypt Exploration Fund, whose yearly excavations and annual *quarto* volumes are familiar to many outside of the scientific world, is engaged in a most important geographical, topographical and historical undertaking under the title of ‘ The Archæological Survey of Egypt,’ the initial volume of which is now ready—a *quarto*, with forty-nine plates and illustrations (some in colors), to accompany the letter-press, describing fully the famous tombs of Beni Hasan. Subscribers of not less than \$5 to the Survey will receive this volume and the Annual Report, containing the names of subscribers and interesting matter. Subscribers of not less than \$5 to the yearly explorations receive the respective volume and report. The survey of Tel-el-

Amarna, in 1893, promises to be of equal value and interest to that of Beni Hasan.

"Of the mural scenes at Beni Hasan, Miss Amelia B. Edwards truly said that 'each wall-painting is an illustrated page from the history of social science between four and five thousand years ago.' There are pictures of people from the geographical nomes of Egypt and of foreigners *en route* to pay respects or tribute to the prince or governor; of the wild and domestic fowls and animals of the Nile valley; of the arts, industries and trades of the people, and representations of domestic life and 'society at court' that throw much light on how men lived and ruled at a period contemporaneous with the early Hebrew patriarchs. These delineations by pen and brush will be of popular and scientific value. The Survey aims at *exactitude* in the highest sense of the word. So important is this undertaking that I presented a paper upon Beni Hasan at the annual meeting of the American Oriental Society in Washington last April. (See Proceedings, pp. 207, 208.)

"Funds are absolutely needed for our work, and in the emergency MR. ALBERT AUB, No. 43 East 83d Street, or No. 41 New Street, New York City, kindly consents to receive subscriptions, to furnish circulars and to correspond upon the subject. He is a valued member of the American Geographical, and Egypt Exploration Fund, Societies. All subscriptions are privately acknowledged by me and publicly acknowledged in the monthly archæological magazine *Biblia*.

"WM. C. WINSLOW,

"Vice-President of the Egypt Exploration Fund.

BOSTON, December 15, 1892.

THE LETTER OF COLUMBUS ON THE DISCOVERY OF AMERICA.*—This beautiful volume, No. 41, of 250 copies printed on hand-made paper, is, it may be hoped, only the first of many publications for which scholars will have to thank the Trustees of the Lenox Library. The president's prefatory note says :

"The present facsimile, and reprint of the four Latin editions of the Columbus Letter, belonging to the Lenox Library, are published by the Trustees at this time, as an appropriate tribute to the memory of the great discoverer.

"JOHN S. KENNEDY,

President."

"NEW YORK, October 21, 1892.

The introduction by Mr. Wilberforce Eames, Assistant Librarian, tells concisely and with the necessary bibliographical detail what is known concerning the editions of the Letter.

It is, perhaps, through an oversight that the name of the translator is not given. He seems to have done his work carefully and well, though he slips in the first line of p. 7, where he renders *naves hujusmodi* by *these kind of ships*.

EGLI'S NOMINA GEOGRAPHICA.—The second and greatly augmented edition of this admirable work has now reached its fifth number, which closes with the name *Nimrud Dagh*, the volcanic mountain chain on the western side of Lake Van, in Armenia. Few books are more entertaining, and the reader gives himself up with confidence to a guide who aims to walk on sure ground ; for where Dr. Egli is not satisfied with a derivation he says so, after stating what is known.

* The Letter of Columbus on the Discovery of America. *A Facsimile of the Pictorial Edition, with a New and Literal Translation, and a Complete Reprint of the Oldest Four Editions in Latin.* Printed by Order of the Trustees of the Lenox Library. New York, MDCCCXCII.

He closes the notice of *Lausanne* with the words: 'Mehr Licht!' and, after giving reasons for rejecting a tempting etymology of *Lisboa*, he remarks that here also it were desirable to have a good deal of light.

At the same time, no man can know everything and Dr. Egli, in a note on the cover of the fifth *Lieferung*, invites correction of errors. Two or three instances, in which he seems to have been misled, may be mentioned.

He begins the article on *Florida* with these words: "Florída, oft mit falscher Tonlegg, *Flórida*," etc.: "Florída, often with a false accentuation, *Flórida*," etc.

The peninsula has formed part of the United States for more than seventy years, and no American has ever called it *Florída*. The pronunciation *Flórida*, like the English pronunciation of Trafalgar, is irrevocably settled, and must be recognized as one of the two correct forms.

On p. 362, Dr. Egli says, without giving his authority, that the English navigator Drake bestowed the name of the Golden Gate on the entrance to San Francisco Bay, in 1578, when "he already knew that California was a land of gold," and that he thought the place would be the site of a world-city.

The tradition which associates Sir Francis Drake with San Francisco Bay was finally disposed of in a paper read before the California Historical Society, in March, 1889, by Prof. George Davidson, of the U. S. Coast and Geodetic Survey.

Prof. Davidson's acquaintance with the coast of California is exact and thorough; he proves that Drake could not see from Point Reyes the entrance to the Bay

of San Francisco, nor the sign of a harbor in that direction; that the white cliffs, which Drake saw every day before his eyes from his anchorage, do not exist in the vicinity of the Golden Gate; that the Farallones, which Drake saw "a little without" his harbor, are below the horizon of the Golden Gate, and that he could not have reached them from San Francisco with the summer winds without making several tacks towards Point Reyes; and that in the chart No. 85 of Dudley and in the Carta Particolare the soundings laid down in the channel to Drake's anchorage mark 8, 5, 4 and 3 fathoms, while the depth at the entrance to San Francisco Bay is 20 fathoms, and in the Golden Gate 60 fathoms.

The Golden Gate is said to have been so called for the first time by Fremont, in the *Geographical Memoir of California*, published in 1848.*

The whimsically trivial names too common in American geography do not disturb Dr. Egli's equanimity. He records on p. 255 the Dolly Varden Lake, and explains the name, as follows: "*Dolly Varden* is a technical term for the striped and flowered stuff, which was fashionable this year (1872) in America." He adds a quotation from a geographical journal, in these words: "This is a far more practical way of bestowing a name than the thousands of Victorias scattered by the Englishmen through the world."

Perhaps so, but that is a matter of taste, and the word *thousands* is a fine specimen of the figure known as

* The Annals of San Francisco, by Soulé, Gibson and Nisbet, New York, 1855; p. 149.

hyperbole. It must be added that the British Victorias are to be compared, not with Dolly Varden, but with the American Washingtons; and there is nothing to choose between them.

The supplement, it may be supposed, will register *Eritrea*, the appropriate name of the Italian colony on the Red Sea (Mare Erythræum), and the queer word *Ibea*, by which the English are pleased to designate the territory of the Imperial British East Africa Company.

NANSEN'S ARCTIC VOYAGE.—Dr. Nansen proposes to enter the Arctic Ocean on his five-years' voyage, or drift, in the early summer of 1893, through the Kara Sea, and to attain the highest possible point in open water to the west of the New Siberia Islands.

Beyond that point he will trust himself to the ice and the current which runs, as he believes, across the pole.

His vessel, the *Fram* (Forward), has been built after his own plans. It is 101 feet in length and 33 feet in width, pointed at both ends, with rounded sides and a comparatively flat bottom. The sides are from 28 inches to 32 inches in thickness, so as to give great strength and stiffness to resist the pressure of the ice, though it is Nansen's belief that, as this closes in, the ship will be lifted up and will in that way escape crushing.

The engine is of 160 horse-power and the daily consumption of coal is calculated at $2\frac{1}{4}$ tons.

Petroleum will be used for heating, and the cooking will be done with alcohol. There will be an electric motor, to be driven by a windmill or by a treadmill.

Six very strong boats will be taken, with every equipment, and sledges such as were used in the crossing of Greenland.

The party will consist of twelve picked men, including scientists, and the ship will be under the command of Capt. Otto Sverdrup, who was in the Greenland expedition.

Nansen will carry neither spirits nor tobacco among his stores.

Should the ship be crushed, the boats are strong enough to supply her place, and to save the crew.

It is supposed that the current from the Siberian coast will finally take the *Fram* to Greenland.

Those who are most familiar with Arctic voyages look upon this bold scheme without approval, but it seems well to recognize the fact that Dr. Nansen has adopted his plan with forethought, and after deliberate study of all the known conditions. He has found twelve men who share his convictions and who are ready to pass five years with him in the frozen North, far beyond the reach of human aid ; and the daring should not obscure the reasonableness of the enterprise.

RAILROADS IN THE UNITED STATES.—The Interstate Commerce Commission issued in December a synopsis of the Statistics of Railways in the United States, as shown in the Fourth Statistical Report for the year ending June 30, 1891.

It appears that the total mileage was 168,402.74 miles. This number indicates the length of single track mileage, the total mileage of all tracks being 216,149.14 miles. The length of single track per 100 square miles of territory, exclusive of Alaska, was 5.67 miles, and the length of track per 10,000 inhabitants was 26.29 miles. The length of line in some States per 100 square miles of territory was

for Connecticut 20.77 miles, for Delaware 16.10 miles, for Illinois 18.25 miles, for Iowa 15.12 miles, for Massachusetts 25.99 miles, for New Jersey 27.71 miles, for New York 16.19 miles, for Ohio 19.68 miles, for Pennsylvania 22.77 miles. The only countries in Europe which have an excess of 10 miles per 100 square miles of territory are Germany with 12.77 miles, Great Britain with 16.52 miles, France with 11.23 miles, Belgium with 28.71 miles, Holland with 13.83 miles, and Switzerland with 12.43 miles. No country in Europe, Sweden alone excepted, has 10 miles of line per 10,000 inhabitants; while in this country but two States have less than 10 miles of railway per 10,000 inhabitants.

The increase in railway mileage during the year was 4,805.69 miles. This is less than the average of increase for several years past. The greatest activity in railway building seems to have been in the States lying south of the Ohio and east of the Mississippi Rivers, the total increase in these States being 1,670.83 miles.

There were on June 30, 1891, 1,785 railway corporations, of which 889 were independent companies for the purpose of operation, and 747 were subsidiary companies, the remainder being private lines. The report further shows that 16 roads have been abandoned during the year, and that 92 roads, representing a mileage of 10,116.25, have disappeared by purchase, merger, or consolidation. The actual number of railway corporations in 1891 is less than the number which existed in 1890, notwithstanding the fact that a considerable number of new lines were chartered during the year. The tendency toward consolidation is clearly indicated by the report. On June 30, 1891, there were 42 companies, each of which controlled a mileage in excess of 1,000 miles, and nearly one-half of the mileage of the country is the property of these 42 companies.

Another classification shows that there are 80 railway companies, each of which has a gross revenue in excess of three millions of dollars. The railways of this class control 69.48 per cent. of the total mileage of the country, receive 82.09 per cent. of the amount paid by the public for railway service, and perform 83.76 per cent. of the total passenger service and 82.66 per cent. of the total freight service of the country. Out of the total of 81,073,784,121 tons of freight carried one mile, the railways in question carried 67,008,448,436.

The total number of locomotives was, on June 30, 1891, 32,139, an increase of 1,999 during the year, and the total number of cars was 1,215,611, an increase of 45,944 during the year. The number of locomotives per 100 miles of line was 20; the number of passenger cars per 100 miles of line was 17; and the number of freight cars per 100 miles of line was 714.

The increase in equipment during the year, including locomotives and cars, was 47,943, while the increase in the equipment fitted with automatic couplers was 53,716, and the increase in equipment fitted with train brakes was 39,505. The estimated increase in equipment for the year 1892 is 29,821, while the estimated increase in equipment fitted with automatic couplers is 98,563, and the equipment fitted with train brakes is estimated to have increased 96,503.

The number of men employed on railways in the United States during the year covered by the report was 784,285, being an increase of 34,984. The number of

men employed per 100 miles of line was 486. The report brings an interesting fact to light by showing that the number of men in the employ of the railways in proportion to the total population was 1 to 87 inhabitants in 1889, 1 to 84 inhabitants in 1890, and 1 to 82 inhabitants in 1891. Each engineer carried on an average 369,077 passengers 1 mile and 2,329,639 tons of freight 1 mile.

The total capitalization of the railways of the United States is \$9,829,475,015, or \$60,942 per mile of line. This shows an increase in outstanding capital of \$602 per mile of line as compared with the 1890 report. An analysis of the changes in capital outstanding shows that income bonds have increased from \$76,933,818 to \$324,288,690. A considerable portion of this increase is probably due to a conversion of stocks into income bonds. It is significant because it shows an increase in that form of property for the management of which directors are not held to strict responsibility. Equipment trust obligations have also increased from \$49,478,215 to \$54,755,157. A few years ago the opinion prevailed among railway men that the leasing of equipment by railway companies was fast disappearing. This opinion is not supported by the facts.

The gross earnings from operation during the year ending June 30, 1891, were \$1,096,761,395, or \$6801 per mile of line. Operating expenses were \$731,887,893, or \$4538 per mile of line, leaving the net earnings from operation \$364,873,502, or \$2263 per mile of line. The net earnings per mile of line were less than the net earnings of the previous year by \$37. An analysis of gross income shows that freight traffic gave rise to \$736,793,699, or 67.17 per cent. of total earnings, and that passenger traffic gave rise to \$281,178,599, or 25.64 per cent. of total earnings. The amount received from carrying mail was \$24,870,015, and the amount received as rentals from express companies was \$21,594,349. The analysis further shows that \$133,911,126 were received by railways as income from investments. The assignment of operating expenses shows that 34.08 per cent. is chargeable to the passenger service, and 65.92 per cent. to freight service. The percentage of operating expenses to operating income was 66.73 per cent. The number of passengers carried during the year was 531,183,988; the number carried one mile was 12,844,243,881. The number of tons of freight carried was 675,608,323, the number carried one mile was 81,073,784,121. The total number of miles run by passenger trains was 307,927,928, and the number of miles run by freight trains was 446,274,508. The average journey per passenger was 24.18 miles, and the average haul per ton of freight was 120 miles. The average number of passengers in a train was 42, and the average number of tons of freight in a train was 181.67. The average revenue per passenger per mile in 1891 was 2.142 cents, and the average revenue per ton per mile was .895 cent. The average revenue per train mile, passenger trains, was \$1.06,111 and the average revenue per train mile, freight trains, was \$1.63,683.

In narrating the statistics of accidents, the report continues its dreary tale of numbers killed and numbers injured, and shows that casualties during the year ending June 30, 1891, are greater than in any previous year covered by reports to the Commission. The number killed during the year was 7029, and the number injured was 33,881. Of these totals the number of employees killed was 2660

and the number injured was 26,140. The number of passengers killed was 293, and the number injured was 2972. A classification of casualties according to the kind of accident shows 415 employees were killed and 9431 injured while coupling and uncoupling cars; 598 were killed and 3191 injured falling from trains and engines; 78 were killed and 412 were injured from overhead obstructions; 303 were killed and 1550 were injured in collisions; 206 were killed and 919 were injured from derailment of trains; 57 were killed and 319 were injured from other accidents to trains than collisions and derailment already mentioned; 20 were killed and 50 injured at highway crossings; 127 were killed and 1427 were injured at stations; the balance, which makes up the total of 2660 killed and 26,140 injured, is due to accidents which do not naturally fall in the classification adopted for report. Referring to passengers, 59 were killed and 623 injured by collisions; 49 were killed and 837 injured by derailments; 2 were killed and 34 injured by other train accidents; the balance, making up a total of 293 killed and 2972 injured, being assignable to accidents at highway crossings and at stations and to other kinds of accidents.

This report emphasizes the necessity of legislation compelling railways to adopt train brakes and automatic couplers, and also suggests that some steps be taken besides the adoption of the train brake to prevent the frequency of casualties from falling from trains and engines. The large number killed and injured from collisions also brings prominently into notice the necessity of extensive use of the Block System in the handling of trains and a more perfect application of the principle of personal responsibility in the case of accidents. Not only are the accidents of the year covered by this report greater than those of previous years, but, when compared with the increase in employees, they are relatively greater than those of the previous year. Thus, during the year ending June 30, 1891, 1 employee was killed for every 296 employees, and 1 employee injured for every 30 men in railway service. The corresponding figures for the previous year are, 1 man killed for every 306 employees, and 1 man injured for every 33 employees. This same fact is also presented in another manner. The increase in the number of employees killed during the year covered by the report over the previous year is 9 per cent., and the increase in the number injured is 17 per cent., while the increase in the number of men taken into employment is less than 5 per cent. The corresponding comparison for casualties to passengers shows that, while there has been a relative decrease in the number of passengers killed, the number of passengers injured shows a much greater increase than the increase in the number of passengers carried.

The figures relating to railway mileage would be more satisfactory if they included Alaska. That territory is undeveloped, but it is a part of the United States and must be taken into account. The principle which excludes it applies equally to undeveloped areas in all

Territories and States and in other countries, and comparative statistics, elaborated on such a principle, must be regarded as an ingenious pastime.

TO CHANGE THE NAME OF AMERICA.—The *Sociedad Científica "Antonio Alzate,"* of Mexico, at a special meeting held August 13, 1892, adopted, with one dissenting voice, the proposition of Messrs. Puga and Aguilar "that the society take the initiative in changing the name now borne by the New Continent for that of Colombia."

This is, perhaps, not the least remarkable of the utterances called forth by the celebration of the 400th anniversary of the Discovery, and it should not be lightly dismissed. It is true that there does not appear to be any machinery for effecting the change of name; but this is a matter of detail, and it were rash to assign or to assume a limit to the resources of science. Some objections suggest themselves. It may be doubted whether the change would tend to the increase of harmony, for while on the one hand it would put an end to the noise of the fight concerning the origin of the name *America*, on the other it would be the signal for a war to the last word on the question whether the continent should be called *Colombia* or *Columbia*. Are the people of these United States to go without a name while the debate is in progress? May not some other society, moved to emulation, rush in during the heat of the battle and turn us all into *Eriksonians*? The "Antonio Alzate" Society has yet time to avert these and other disasters by the simple process of reconsidering the vote.

THE SHUSWAP INDIANS.—Dr. George M. Dawson, Assistant Director, Geological Survey of Canada, contributes to the *Transactions* of the Royal Society of Canada, Vol. IX., a paper on the Shuswap Indians. The name is employed to designate all the Salish people of the southern inland portion of British Columbia, bounded on the east by the Kootenaha, on the north by the Tinneh, and westward by various tribes of the Lower Fraser and coast.

The winter dwellings of these people are partly subterranean, and the hollows marking the former positions of houses in certain parts of the country show that the diameter must have been in some instances as much as twenty-five feet. Upon the main framework of the house fascines of small sticks and brush are laid radially, and upon these the covering of earth is spread.

The winter villages represented the permanent centre of the tribal subdivision.

The permanent marks of old inhabited places are : *Sites of old Keekliwee-houses* (Chinook for winter dwellings); *old fish-caches*, hollows from three to six feet wide, cylindrical, and lined with bark ; dried salmon were piled in these hollows and the place was covered with bark and earth ; *root-baking places*, where a fire was built on a cleared spot. When the soil was sufficiently heated the roots, wrapped in mats or herbage, were laid on the bed of the fire and earth was piled over them. When dug out in a baked condition, the roots were eaten at once or dried for future use. After some years these root-baking places appear as low cones from fifteen to twenty feet in diameter, with miniature craters in the middle, and might easily be

mistaken by an imaginative person for old sacrificial sites.

Another enduring sign of an old camp is a little group of fire-scarred stones, buried in moss or other vegetation ; the mark of an old sweat-house.

Near all the permanent villages or winter village sites are burial places, generally on sand-hills and often on prominent points of terraces or on low hills overlooking the river. No burial places were noticed on the higher plateaux or in the mountains, and it is probable that the bodies of those who died in such places were always carried down to the lower valleys.

A small house-like or tent-like erection was made over a grave, and this was usually surrounded by a fence or enclosure, while poles with flags or streamers were also set up. Some years ago carved or painted figures, generally representing men, were to be found about the graves along the Fraser and Thompson, but crosses are now very frequently substituted for the old carvings.

On the point of land between the Fraser and Thompson, near Lytton, is a low sand-hill about 150 yards long and 50 or 60 yards in width. This has been employed for purposes of burial. Near the sand-hill there are traces of an old village site. The strong up-river winds have resulted in curtailing the limit of the sand-hill on its southern side and extending it northward. In 1877 large numbers of bones, etc., were lying about, and the collections then made, including seven moderately perfect skulls, are now in the museum of the Geological Survey. It seemed that many or most of the bodies had been buried in the usual upright sitting

posture, though others appear to have been bent into a sitting posture and then laid on the side, and a few cases seemed to show that the bones had been laid closely together after the disappearance of the softer parts of the body. Yellow and red ochre was common in some of the graves, and one head had been thickly covered with red ochre. The best implements were those associated with bodies buried near the crest of the hill. It seemed obvious in all cases that the objects were rather intended to represent certain forms of property than to be of actual utility. Copper, in the form of small beaten sheets or plates, was the only metal certainly found in association with the interments. A small blue glass bead seemed to belong to one of the later graves. There was little or no evidence of traffic with the whites, and it was conjectured that the place had been abandoned shortly after the whites first reached the West Coast. The Indians now resident at Lytton state that they have no knowledge of the people who were buried at this place.

Various small animals appear to have been buried with some of the bodies, and it would appear that the people were rather hunters than fishermen, though the presence of numerous adzes seems to suggest canoe-making as an art practised. Shells of dentalium and perforated scallop shells (*Pecten caurinus*) show that trade was carried on with the coast.

Of objects found in these graves besides those above referred to, the following may be mentioned: adzes made of wapiti antler, precisely similar to those found in shell-heaps on Vancouver Island; jade adzes and chips and selvage pieces of jade cut from adzes during their manufacture; antler points and pointed bone awls

or bodkins ; stone skin-scrapers ; borers of chert or arrow-stone, and notched edges of the same, probably for scraping and shaping thongs ; pestle-shaped hammers and one oval hammer of granite, well shaped, and with a deep median groove for attachment ; straight pipes made of steatite, shaped much like an ordinary cigar-holder, and marked with patterns in incised lines.

Dr. Dawson notes the following customs :

In primitive times, when a man left a widow, his brother next in seniority took her to wife.

The proper name of a man is changed from time to time, the new name assumed being that of some dead kinsman. The chief calls a gathering of the people and the new name is announced, but without a ceremonial feast.

Young men on reaching manhood formerly went away alone into a solitary part of the country, where they remained three or four months. They were to keep away from other people.

Young women, at the time of reaching maturity, wander forth alone after dark, breaking small branches from trees and scattering or suspending them on other trees. The meaning of this still-prevailing custom is not explained.

All the Shuswaps formerly had hereditary hunting-grounds.

Devices for conveying information by signs are : a piece, or pieces, of material from a woman's dress, left in a forked twig, to show that a person, or a party, has passed ; if the stick is upright, it means that the hour was noon ; if inclined, it shows the direction of the sun at the time, or the direction in which the person went ;

and to show both, a large stick gives the position of the sun, a smaller the route followed.

Besides the dug-out, small canoes are made of the bark of the western white pine (*Pinus monticola*). The inner side of the bark becomes the outer side of the canoe, which has projecting spur-like ends, and is lashed together and sewn with roots.

The salmon, which forms great part of the food, is taken in traps and weirs as well as in bag-nets, fastened to the end of a long pole. It is also speared by torch-light.

The Thompson Indians say that fire was originally obtained by friction of a wooden drill turned between the hands while the point was pressed against a dry poplar root.

Bows were made of juniper wood (*Juniperus occidentalis*) and also of yew (*Taxus brevifolia*). Arrows were made of the service-berry wood. With respect to the jade, which occurs in British Columbia among the natives, Dr. Dawson considers that it was obtained in the form of rounded masses from the gravel banks and bars of the Frazer and Thompson. Good specimens of jade adzes have been found at Little Shuswap Lake and at Kamloops. The jade was cut by quartz crystals.

The pestle-shaped hammer, common on the coast, is found in the Shuswap country, but the large stone mortar seems to be unknown.

The introduction of flour and the potato has diminished the importance of the native roots still used to some extent for food.

With reference to a small lizard, the Indians have a superstition that a man seeing one of them is followed

by it wherever he may go till it finds him when asleep, and entering his body proceeds to eat out his heart.

The late Mr. Bennett, of Spallumsheen, told Dr. Dawson in 1877, that the Indians employed by him in making a ditch, on coming into camp in the evening would jump several times over the fire in order to lead the pursuing lizard to enter the fire in attempting to cross. He also noticed that they tied up the legs of their trousers when retiring. If while at work during the day they saw a lizard, it would be caught in a forked twig, the ends of which were then tied together with a wisp of grass and the butt end of the twig afterwards planted in the soil. Thus treated the lizard became a mummy.

Nothing is known of the origin of these people, but their first acquaintance with the whites appears to have been about the beginning of the present century. A later event was the assassination of Samuel Black, who was in charge of the Hudson Bay Co.'s post at Kamloops. This happened, according to Bancroft, in the winter of 1841-42, and Dr. Dawson refers to it in order to point out that it has already become the centre of mythical stories among the Shuswaps, a fact which throws some light on the probable mode of origin of other mythological tales.

Some of the names given to the stars are interesting:

The Pleiades are called *hu-ha-oos*, or "the bunch," and also *kul-kul-sta-tim*, or "people roasting," from a story which relates that a number of women who were baking roots became changed into this group of stars.

The morning star is named *chi-whi-looh-tan'*, or "coming with the daylight," also *wo-pk-a'*, or "one with hair standing out round his head."

The four stars which form the quadrilateral of the Great Bear are known as the bear stars, *kum-a-koo-sas'-ka*. The three following large stars are three brothers in pursuit of the bear. One leads a dog (the small companion star).

The stars of Orion's belt are named *kut-a-kekt'-la*, or "fishing."

The milky way is named *chiw-i-wi-ow'-is*, the road or path of the dead.

The aurora borealis is named *ses-a-am*, which appears to mean "cold wind," but this is uncertain.

The Sta'-tlum-oooh (Lillooets) call the Pleiades *in-mox'*, meaning the "bunch" or "cluster"; the Great Bear *me-hatl'*, the name of the black bear.

The face of the moon is said to represent the figure of a man with a basket on his back, and the name of this man is *Wha'-la*.

Dr. Dawson closes his paper, which is illustrated by a map of the Shuswap country, with a list of 220 native names of places on the Kamloops sheet of the geological map of British Columbia, with their meanings.

HEIGHT AND POSITION OF MOUNT ST. ELIAS.—Mr. Mark B. Kerr, topographer of the expedition of 1890, prints in the *Transactions* of the Technical Society of the Pacific Coast, San Francisco, Vol. IX., No. 8, a discussion of results concerning the height and position of Mount St. Elias.

Mr. Kerr gives the ten measurements of the mountain, beginning with that of La Pérouse, in 1786, and ending with that of the National Geographic Society, and the U. S. Geological Survey, in 1891. He attaches

more weight to the result obtained by Malaspina, in 1791, than to any other of the earlier measurements, for the reasons that the vertical angle taken by Malaspina agrees closely with that of 1874, and that the general topography of his chart is comparatively trustworthy.

Dr. W. H. Dall, in 1874, made the height 19,500 feet, with a probable error of 500 feet. Mr. Kerr thinks that this limit of error is too small and that a closer approximation to the truth would be ± 1500 feet.

The loss of the transit instrument early in the work of the expedition of 1890 prevented the carrying out of a scheme which, in Mr. Kerr's judgment, would have yielded better results than any other.

Mr. Israel C. Russell, in his report on the work of 1891 (*National Geographic Magazine*, Vol. III., p. 231), makes the height of Mount St. Elias 18,100 feet, with a possible error of 100 feet.

Mr. Kerr, taking into account the results of the computation of distances and the computations of heights from three positions, as well as the distance of the base stations from the peak, the different temperatures, atmospheric changes and uncertainty of refraction, concludes that the allowance for possible error is too small; and he is led to believe that the highest elevation recorded is too great and that the lowest is underestimated. "A mean of all the observations taken upon St. Elias," he says, "gives a result of 16,693 feet, and the writer is inclined to the belief that its true elevation, when determined, will not vary much from this mean."

The method is not unlike that of the philosopher who combined his information on Chinese metaphysics, but the result may stand.

Concerning the geographical position of the mountain, Mr. Kerr writes :

“ The computation also of the geographic position of Mount St. Elias, using the Azimuth and angle of elevation obtained at Port Mulgrave by the U. S. Coast and Geodetic Survey in 1874, combined with elevation obtained by the expedition of 1891, is open to much criticism as a crude and unreliable method, and very little weight can be given to the result.”

There was no indication of volcanic activity during the expedition of 1890, but an immense cloud of dust, which was seen rising from the avalanches rushing down the slopes of St. Elias, Cook, and Augusta, might have been taken by observers at a great distance for the smoke from a volcano.

ORIZABA.—Mr. J. T. Scovell, of Terre Haute, Ind., writes to the *American Naturalist* for October, 1892, a report of his measurements of Orizaba, made in 1891 and 1892.

In company with Mr. O. G. Bunsen he carried a line of spirit levels up to the 14,000 level on the mountain and made two ascents from that point, one on the 29th of July, the other on August 3, 1891. The average of the two results obtained with an aneroid barometer adjusted by comparison with a standard mercurial barometer was 18,179.16 feet.

In April, 1892, assisted by Señor E. O. Moreno, Mr. Scovell measured a base line 1550 feet long, near the 13,000 feet level and obtained the angles necessary to determine the elevation of the peak above each end of the base line. The results were :

Railway levels from tide-water at Vera

Cruz to Chalchicomula, . . . 8313.571 ft.

Spirit levels from Chalchicomula to

Station A, 4696.188 "

Triangulation from Station A, . . . 5302.267 "

Elevation, 18312.026 "

Spirit levels from Chalchicomula to

Station B, 4720.569 ft.

Triangulation from Station B, . . . 5282.146 "

Railway levels (as above), . . . 8313.571 "

*18316.286 "

The mean elevation is 18314.156, a result which does not greatly differ from that of 18,205 feet, obtained by Prof. A. Heilprin. This observer's measurement agrees still more closely with the 18179.16 feet, obtained by Mr. Scovell with the aneroid barometer, and there is little reason to doubt the conclusion that Orizaba is the highest mountain in Mexico and, possibly, in North America.

THE PROCEEDINGS OF THE ROYAL GEOGRAPHICAL SOCIETY.—It has been resolved by the Council that with the beginning of 1893 the title of the Royal Geographical Society's monthly publication shall be changed from "Proceedings" to "The Geographical Journal."

The size of the publication will be increased to 96 pages, and maps and illustrations will form a more prominent feature than in the past. An index to the

* This total is printed 18316.687 in the *American Naturalist*.

fourteen volumes of the new Monthly Series (1879-1892) will be prepared and issued.

THE EUROPEAN RACE OUTSIDE OF EUROPE.—M. Em. Levasseur, in an address before the late Italian Geographical Congress, at Genoa, on the subject of emigration, made a calculation of the number of Europeans and persons of European descent in the world, outside of Europe; individuals, that is to say, of pure blood, or of mixed blood in such proportion that they might fairly be considered as belonging to the race.

He found that there were of such persons, in the year 1800, 9,500,000 principally in America. This was the result of three centuries of colonization and conquest.

“Ninety years later,” says M. Levasseur, “I find that the number of representatives of the European race, outside of Europe, amounted to 91,500,000; and though this calculation, like that for the year 1800, cannot be regarded as exact, it is certainly nearer to the truth than the earlier estimate because the statistical data for 1890 were more numerous and more worthy of confidence than those which could be brought together for the year 1800.

“It follows that, in 90 years, the number has increased tenfold.

“Among the phenomena of the nineteenth century, this is one of the most important, for this development of the European race has changed the political economy of the world.”

Mr. de Semenov, president of the Imperial Russian Geographical Society, who followed M. Levasseur, called attention to an expansion of the European race

in a region generally overlooked by statisticians. He pointed out the fact that geographers in former ages, and even as late as the eighteenth century, regarded the Don, or at most the Volga, as the eastern limit of Europe. There is, even now, some difference of opinion with regard to this limit, but most persons fix it at the Ural Mountains and the river Ural.

Mr. de Semenov showed that the geographers of former times were correct in establishing the Asiatic boundary more to the westward, because in the sixteenth century the great plain of eastern Europe was really an Asiatic country, inhabited by Tatar hordes.

Little by little these were conquered and absorbed, or expelled, by Russia, and their place was filled by Muscovite settlers; and Mr. de Semenov estimated that Europe had gained in this way an addition of 30,000,000 inhabitants.

MR. CONWAY IN THE KARAKORAM.—In the *Proceedings* of the Royal Geographical Society for November, Mr. Conway reports the doings of his party in the Karakoram Range during the month of August.

They first attacked the great Baltoro glacier, which was found to be covered for two-thirds of its length with stone-*débris*, so that the ice was not visible, except where lakes or crevasses occurred. There was no passage along the banks of the Baltoro and the route led straight up the middle of the ice, over a series of prodigious mounds, one of which was 200 feet in height. The weather was very bad and the progress was slow, but there was compensation in the magnificence of the scenery.

After four days camp was pitched by the side of a little lake on the north bank, and it was determined to ascend a peak to the north, supposed to command a view of K2, or Mount Godwin-Austen, the second highest mountain in the world.* Early in the morning of the 10th of August an enormous mountain, not marked on any map, was in sight, about fifteen miles away to the southeast. Mr. Conway named it the Golden Throne, because "auriferous veins permeate its mass," though it does not appear how he became acquainted with this interesting fact. He and his men headed for the Golden Throne, and did some very rough work on the way. The elevation was more than 17,000 feet, but no inconvenience was felt from the rarity of the air, and even at 20,000 feet all went well, so long as no great exertion was made.

* Mr. Conway here makes a digression on names. It has been proposed, he says, to attach to K2 the name of Col. Godwin-Austen, but, "as it is surely inappropriate to exchange the ancient and beautiful name of Gaurisankar for that of Mount Everest (euphonious though it be) so neither does it seem to me suitable to call the monarch of the Mustagh Range Mount Godwin-Austen." He chooses to call it the Watch-Tower of India, though the name it bears was formally bestowed upon it in 1888 by the Royal Geographical Society.

In the *Proceedings* of the R.G.S. for December, p. 857, appears the following letter from Mr. Conway, dated Abbottabad, Nov. 2, 1892: "After we left Askoley for the Baltoro Glacier, Mr. Eckenstein, who remained behind, found a man who drew for him on the sand a rough map of that glacier and its surrounding mountains. He put in both the Mustagh Passes, the Mustagh Peak, K2, Gusherbrum and Masherbrum, all in their right places. He stated that Skinmang is the local name for the great Mustagh Peak, and Chiring the name for K2. I have recently noticed that though the great Mustagh Peak is scarcely, if at all, indicated on the Government map, it is quite clearly marked on the map that illustrated Col. Godwin-Austen's paper in the 'Proceedings' of the Royal Geographical Society."

The paper referred to is probably the one published in the R.G.S. *Journal*, Vol. XXXIV., 1864. and in the accompanying map Chiring is placed 20 miles to the west of K2.

On the 18th of August the explorers encamped at an elevation of 16,500 feet, at the foot of the Golden Throne, with a peak of 25,000 feet on each side, and glaciers radiating in every direction. A week was spent in gradual approaches and on the 25th the peak was assaulted from the Upper Plateau Camp, at an altitude of 20,000 feet. The climbing was very hard, and the men had frequently to stop and rub their feet to save them from frost bite, though the heat of the sun was oppressive. After passing the first point on a ridge 1,300 feet above the camp, the party came to another ridge of snow-covered blue ice, so hard that every step had to be cut with the axe, and Zurbriggen, the Swiss guide, though he never faltered, found the work very fatiguing. The top of a third peak, which Mr. Conway calls the Pioneer, was reached at last, and 1,300 feet above was the summit of the Golden Throne, cut off from approach by a deep depression; and this was the end of the work.

A roof of cloud was poised about 2,000 feet above the peak, and not a sound broke the utter stillness of the air.

Mr. Conway photographed the panorama and took such measurements as were possible, some of his instruments having been left behind with two of the Goorkhas, who had been overcome by the mountain sickness. The barometer stood at 13.30 inches and the thermometer at 54°, Fahrenheit. There was no insufficiency in the supply of oxygen, and Zurbriggen smoked his cigar in comfort. "Finally," says Mr. Conway, "I took tracings with the sphygmograph of Zurbriggen's pulse and mine; and here the damaging effect of alti-

tude made itself apparent. Our lungs were working well enough, but our hearts were being sorely tried, and mine was in a particularly bad state. We had all nearly reached the limit of our powers."

The Calcutta correspondent of the London *Times* wrote on the 26th of September that Mr. Conway had gone to Leh to compare his barometer with the standard there, and that he expected to show that his party had attained a height of at least a thousand feet above Schlagintweit's 22,230 feet in Nepaul, "the highest climb hitherto authentically recorded."

This called forth the following letter :

To the Editor of the Times :

SIR :—Will you allow me to point out that your Calcutta Correspondent was in error in stating that the highest climb hitherto authentically recorded was that of the Schlagintweits in Nepaul, the height being 22,230 ft. ?

Early in September, 1883, Mr. W. W. Graham, accompanied by the late Emil Boss and the guide Ulrich Kauffmann, climbed Kabru, in Sikkim, the height of which, according to the Government Trigonometrical Survey, is 24,015 ft. It is true that in his paper read before the Geographical Society in 1884, Mr. Graham stated that he did not reach the absolute summit, "which was little more than a pillar of ice 30 ft. or 40 ft. above our heads." But if 40 ft. are deducted, the point he gained must yet have been very little under 24,000 ft. His paper, which has a special interest at the present time, will be found in vol. vi. of the "Proceedings of the Royal Geographical Society," and the sentence I have quoted is on page 440.

Yours faithfully,

Savile Club, Oct. 2.

J. S. MASTERMAN.

THE AFRICAN DEATH ROLL.—M. Henri Duveyrier, in a memoir entitled *L'Afrique Nécrologique*,* has recorded the names and achievements of the African explorers who lost their lives by disease or by violence between the years 1800 and 1874. The list contains 160 names.

* Published in the *Bulletin de la Société de Géographie, Paris*, 1874, Tome VIII., pp. 561-644.

M. L. Lanier, in his book *L'Afrique*, published in 1884, added to M. Duveyrier's list the names of fifty-six victims, who perished in the period 1874-1884 ; and M. Paul Barré, in an article in the *Revue Française*, Dec. 15, 1892, brings the story down to the present time, with 158 names for the nine years 1884-1892. He says :

" We may therefore estimate at 374 the lives that have been lost to the civilized world in this century for the sake of unknown Africa. And in these we count only the isolated explorers, those who attempted the peaceful conquest of the black continent.

" It must be left to military annals to register the soldiers who have fallen in the numerous expeditions undertaken by the European powers."

The distinction is well stated, but M. Barré fails to observe it. On pp. 572-573 he gives the names of fourteen French officers, who met their death in the recent campaign against Dahomey, certainly not a peaceful enterprise, however necessary and useful to mankind.

This remark applies also to the name of Lieut.-Colonel Cristoforis, the Italian officer who was killed, with his whole command, by the Abyssinians at Dogali.

It is not easy, indeed, to say who should, or should not, be excluded from such a roll. It would be strangely incomplete without Gordon ; and yet Gordon was not shut up in Khartum as an explorer.

After him, but still famous for good work, come Paul Soleillet, Dr. Nachtigal, Dr. Crozat, Count Porro, Bishop Hannington, Capt. Stairs, Father Lourdel, Dr. Böhm, Capt. Vandevelde, Paul Crampel, Dr. Jühlke

and Lieut. Günther, Dr. Lüderitz, who founded the German colony Angra Pequena, and Silva Porto, who crossed Africa from the Atlantic to the Indian Ocean, in 1853–1856.

There are, however, some names which have been overlooked by M. Barré, and among them Lieut. Tappenbeck, Baron Negri and Dr. Weissenborn.

The mortality for the past nine years, as great as that for the period 1800–1874, bears testimony to the extent of the European interest in Africa.

MONTEIL'S ARRIVAL IN TRIPOLI.—M. Monteil reached Kano, in his journey eastward from the Niger, on the 25th of November, 1891 (*see* BULLETIN No. 3, 1892, p. 441). October 17, 1892, he wrote from Tedjerri, Fezzan, to the French Consul at Tripoli :

“To-day I entered the territory of Fezzan at Tedjerri, coming from Kuka (Bornu). I left Kano on the 19th of February and arrived at Kuka, where I was very well received, on the 10th of April. Kuka I left on the 15th of August with a guide, who was ordered by the sheik to go with me to Murzuk. On the 12th of September I reached Kaur and set out again, on the 29th, for Tedjerri. Nothing of note has occurred, beyond the loss of a good many camels.

“I expect to be at Murzuk on the 25th (October), and to remain just long enough to arrange all things to start for Tripoli.

“Badaire has borne the fatigue admirably, and all my people are with me except two men who left us at Kuka.” It was at this place that M. Monteil found Dr. Nachtigal's Italian servant Valpreda, now a good

Mohammedan, who had almost forgotten his native tongue.

The party arrived at Murzuk and M. Monteil wrote to Capt. Binger from that place on the 30th of October a letter, in which he says :

“I have already hired camels for the (Wadi) Shiali, where I shall reorganize a caravan by hiring camels, and expect, if nothing interferes, to reach Tripoli in the first fortnight of December. My own health is good ; Badaire suffers with swelling of the legs. The journey across the Sudan to Lake Tchad and that across the Sahara have been made without accident.”

According to the *Revue Française* (Dec. 15, p. 582), which quotes this letter without dating it, Murzuk was not reached till the 4th of November.

The explorers started again, Nov. 7th, and arrived at Sokna, nearly midway on the route to Tripoli, on the 18th. They set out again on the 22d, passed through Beni-Ulid and entered Tripoli on the 10th of December.

It is remarkable that throughout this long journey in strange countries, some of them previously unknown to Europeans, M. Monteil met with no opposition, but was everywhere received with kindness.

FORCED LABOR IN EGYPT.—Sir Colin Scott Moncrieff, Under-Secretary of State, Public Works Department, Cairo, wrote in *Nature* of June 18, 1891 (p. 153), as follows :

“The above paragraphs describe generally the improvements that have been brought about in the last seven years. Second to none is the boon that has been conferred on Egypt in the abolition of the *corvée*.

. . . We estimated that to redeem this *corvée* and to pay for all this labor would cost £400,000. Nubar Pasha, in the face of the greatest financial difficulty and opposition, managed to give an annual grant of £250,000 for this object. Riaz Pasha, at the end of 1889, found means of granting the remaining £150,000 and in 1890, for the first time, perhaps, in all history, there was no *corvée* in Egypt."

Sir Colin, as a friend of humanity, must have read with mingled feelings Mr. Cope Whitehouse's letter, here reprinted from the New York *Nation* of November 17, 1892 :

THE NILE CORVÉE.

TO THE EDITOR OF THE NATION :

SIR : In his recent book, "Egypt To-day," Mr. Frazer Rae states that "in December, 1889, the *corvée* was totally abolished in Egypt, for the first time, probably, in all the thousands of years of Egyptian history" (page 177). Mr. Frazer Rae refers to me in such kind terms that I have every interest in maintaining his accuracy. He took infinite pains to arrive at the truth, and if he did not always attain the goal, the obstacles were such as would deceive, if it were possible, the very elect.

No more exact date is given on which the Egyptian serf emerged from the long bondage into the liberty enjoyed by every peasant of Europe. No "Emancipation Proclamation," no "Decree of the Council of Ministers," no "Statute of the Legislative Council" is cited. Mr. Frazer Rae gives as his authority the *N. Y. Nation*, April 21, 1892, p. 299. In a letter from Mr. Woodruff, of whose painstaking efforts to estimate at its fair value the influence of the English occupation of Egypt I was personally cognizant, it is said that the English set about to abolish the *corvée* as a part of their task. The Dual Control of Egypt had long exercised a power which rendered the abuse of the *corvée* impossible without the knowledge, and therefore acquiescence, of Major Baring. In 1882 the entire control passed into the hands of England. In 1884, M. Rousseau having been dismissed, Sir C. C. Scott-Moncrieff was made Under-Secretary of State for Public Works. He held office until July, 1892. In the (London) *World*, October 19, 1892, Sir C. C. Scott-Moncrieff informs its representative that he had instituted many humane and useful reforms.

"For instance, he abolished the *corvée*, a system of State unpaid, forced labor, which pressed most grievously upon the people and constituted one of their great grievances. The *corvée* was employed to repair the banks of the canals, to clear the canals of silt deposit and to assist in the works of irrigation ; but, as the only

remuneration received was meted out in blows and stripes, the effect of this employment may be easily imagined."

This is a correct account of the *corvée*; but when was it abolished, in law or in fact? The law of January 25, 1881, was modified by Arabi Pasha, on March 12, 1882, in favor of the Bedouins. A ministerial order was issued on March 1, 1887, signed by Sir C. C. Scott-Moncrieff, allowing "the tenants of the Pashas" the privilege of redeeming themselves. On January 29, 1888, a decree of the Council of Ministers extended this right of redemption, at forty piastres (\$2.00) per man, to the peasants of *certain* provinces. In 1889 the *corvée* was in force in eight provinces, for the clearance of silt and winter work. "The works were most thoroughly kept in order by the money of the *corvée* ransom, the *corvée* relief, and the *corvée* themselves." (Report, p. 60, §112, Cairo, 1890.) In 1891—nine years after the British occupation—her Majesty's Government published a report by Sir E. Baring, in which he says, "The *corvée* has been wholly abolished." (Egypt, No. 3, March 29, 1891, p. 38.) Sir C. C. Scott-Moncrieff had made the same statement in *Nature*, and Sir E. Baring adopts it with the context almost without verbal change.

Thus Mr. Woodruff and Mr. Frazer Rae might appeal to authorities of the highest repute to sustain them in their position. Nevertheless, it is untenable. The *corvée* has never been abolished. It was called out within a month after Sir E. Baring had said that it had ceased to exist, in April, 1891, to fight the locusts, under the direction of Mr. Wallace of the College of Agriculture. It is in full operation at the present moment. On October 5, 1892, the *Journal Officiel* published (in English) that "Major Brown, Inspector-General of Irrigation for Upper Egypt, is still much dissatisfied with the work of the Kenah *corvée*." On October 8th, "Major Brown specially praises the Mudir [Governor] of Beni-Suef, Mustapha Wahbi, for the very excellent arrangements he has made and the way in which the *corvée* has been worked."

Nor are the numbers of these forced, unfed and unpaid laborers insignificant. In Gharbieh, three thousand peasants were requisitioned from other districts to work in the district of Chirbin. The Governor of Menufieh moves about his province, accompanied by a gang of 500 workmen. In Minieh, 17,513 *corvéables* were reported as under orders on October 10th. In Behera, 1350 laborers were employed at a single point. In Menufieh, 1200 men were at work on one bank. These facts are taken from the official organ of the Egyptian Government, pp. 1208 and 1209.

Fine and imprisonment are the legal penalties for disobedience. The law provides, however, for its own suspension, and remits the case to a Commission, formed, like the Lynch tribunals, out of a group of the neighbors, without a magistrate, who must decide, on the demand of the engineer, within twenty-four hours. There is a picturesque account, too long to quote, of a peasant, Abd el-Aty el-Sarry, who appealed to the Khedive in person in behalf of his father. "The old man" had been beaten, in spite of his obedience to the summons. The village chief admitted that he had inflicted blows. He was "invited" not to

repeat this form of compulsion on the bodies of those under his orders (*Journal Officiel*, September 29, 1892, p. 1203).

There is an ancient tale in which the little boy alleged that he was provided with a large number of first cousins, although his father had never had brother or sister and his mother had been an only child. The sole explanation necessarily imputed to the lad a disregard of truth. I recommend the moral to those who, like myself, can find no other explanation of the contradictions I have cited.

COPE WHITEHOUSE.

LONDON, October 24, 1892.

THE NILE FLOOD.—The flood, which came upon Egypt in September last and did great damage, is accounted for by Capt. Lugard, in his paper entitled, *Travels from the East Coast to Uganda, Lake Albert Edward and Lake Albert*, in the *Proceedings* of the Roy. Geog. Soc. for December. He says, on p. 827 :

“ The close of the year 1891 and the early part of 1892 were exceptional in the matter of rainfall. Usually in this part of Africa the lesser rains begin early in October and cease in the middle of December. From that time the heat and drought increase, and the grass dries up and is burnt, till in the beginning of March the greater rains set in, and a tropical downpour continues with few breaks till the end of May. Last October and November* the lesser rains were unusually heavy, and continued with little intermission till the time of the regular rains in March. There was a little check, and then the rain continued up to the time I left Uganda, in the middle of June. Still they did not cease, and we found the rivers, which should have been running down, all abnormally high. We did not leave this zone of rain, or the rains did not cease (I know not which), till we descended from the Mau plateau at the end of July, and found there had been much drought in Masai-land and Kikuyu. The result was that the Lake Victoria was some six feet perhaps above its ordinary level, and may probably rise still higher. I looked forward with interest to hear if this should have caused any appreciable change in the height of the Nile in Egypt. I found that unusual floods had occurred in September, this not being the time at which the usual high Nile, due principally to the floods poured down by the Atbara from Abyssinia, occurs; and apparently the water took about the same time to reach Egypt, travelling some 3000 miles, as it took me to reach the east coast, which I did on September 1st. This incident is not without its significance. Had I, in Uganda, been able to telegraph or heliograph the news of the abnormal rainfall, and the rise of the Victoria Lake, possibly steps might have been taken to prepare for the floods, and much of the damage caused might have been saved. Egyptian ad-

* 1891.

ministrators may perhaps find herein a new argument for the retention of Uganda!"

Another argument, advanced by Mr. Bosworth Smith, is taken up by a competent authority in the following letter, which appeared in the London *Times* of December 20 :

UGANDA AND EGYPT.

To the Editor of the Times :

SIR :—In the letter from Mr. Bosworth Smith it is said that if it had not been for the occupation of Uganda Germany would be dominating the sources of the Nile and controlling the water supply "on which the very existence of Egypt depends." Perhaps it may be useful to explain this sentence—a sentence not rhetorical, but judicial, a sentence which unquestionably may become one of life or death to a proportion of the six millions who dwell between Wady Halfa and the sea.

There is not the slightest reason to apprehend that any successful effort could be made to deprive Egypt of an ample supply of water during the inundation ; nor does the red water, of such priceless value, come from the Equatorial sources of the Nile. But if as a military operation, or the result of engineering works at the Lakes, a very small amount of flood water were suddenly let loose in September it might produce widespread disaster. The Nile in flood may be discharging 1,000,000,000 cubic mètres in a day. The addition of one-tenth would raise the Nile about twenty inches, quite sufficient to sweep away the earth embankments, now maintained only by unremitting care and the labour of over 100,000 men.

At low-Nile no water reaches the Mediterranean which has not done service in irrigation for three months. Practically all this water passes through Victoria Nyanza. It is during this period, when the total supply for one hundred days is not more than two days' supply in flood, that any Power, holding the Nile or its tributaries, can deprive Egypt for a fortnight, or even longer, of the whole natural discharge of the river through the Nubian Gate at Assouan.

COPE WHITEHOUSE.

8 Cleveland-row, St. James's, December 13.

MASSACRE OF THE HODISTER EXPEDITION.—Details of the destruction of this party on the Congo were received in Paris, on the 6th of December. M. Hodister sent four agents to establish factories at Riba Riba and at Kasongo. Lieut. Mikils accompanied these agents, with four soldiers and a trumpeter.

The Arabs and the natives at Riba Riba refused to recognize the authority of the Congo State and mur-

dered Lieut. Mikils and M. Noblesse. Their heads were stuck on long poles in front of the Chief Nserera's residence.

M. Hodister and three other Europeans, who had been engaged in establishing factories at points on the Lomami, were captured by the natives, tortured, and then eaten.

The report of these atrocities was brought to Stanley Falls by Lieut. Mikils' boy slave, who belonged to a nephew of Tipu Tip, and so escaped with his life.

UGANDA.—It was in 1875 that Henry M. Stanley introduced Christianity into the Kingdom (or Empire as he called it) of Uganda, which lies just north of the Victoria Nyanza. The King Mtesa had been won over to Mohammedanism, but Stanley, who seems to have missed his true calling, went at him with energy.

"Nothing occurred in my presence," he says, "but I contrived to turn it towards effecting that which had become an object to me, viz., his conversion" (*Through the Dark Continent*, Vol. I., p. 202). The result is told on p. 209 of the same volume.

"I have, indeed, undermined Islamism so much here that Mtesa has determined henceforth, until he is better informed, to observe the Christian Sabbath, as well as the Muslim Sabbath, and the great captains have unanimously consented to this. He has further caused the Ten Commandments of Moses to be written on a board for his daily perusal—for Mtesa can read Arabic—as well as the Lord's Prayer and the golden commandment of our Saviour, 'Thou shalt love thy neighbor as thyself' . . . But, oh! that some pious, practical

missionary would come here! . . . It is not the mere preacher, however, that is wanted here. . . . It is the practical Christian tutor, who can teach people how to become Christians, cure their diseases, construct dwellings, understand and exemplify agriculture, and turn his hand to anything, like a sailor—this is the man who is wanted. . . . He must be tied to no church or sect, but profess God and His Son and the moral law, and live a blameless Christian, inspired by liberal principles, charity to all men, and devout faith in Heaven.”

Stanley's appeal brought the missionaries, Protestant and Catholic, but Mtesa wavered in the faith and died at last a Pagan.

His son Mwanga became weary of the strife and bickerings between the so-called Catholic and Protestant parties in his kingdom, and made war upon both of them. They united and deposed him and placed Kiwewa, a son of Mtesa, on the throne. Kiwewa divided his patronage between the Protestants and the Catholics, to the disgust of the Mohammedans, who combined with the Pagans and deposed Kiwewa in favor of Kalema, another of Mtesa's numerous family. They then drove out the Christians, who took refuge in Buddu, on the western shore of the Victoria Nyanza. Mwanga fled to the Roman Catholic mission farther south, where he was kindly received and became, as it seemed, a convert, though it is affirmed that he wrote at the same time to assure the Protestant missionaries that he wished to be guided by them.

It is certain that the Christians in Buddu supplied themselves with arms, and united their forces to reconquer Uganda and restore Mwanga to power.

This they succeeded in doing, and then the religious and political animosities broke out afresh among the conquerors.

The Protestants were English and they chose to regard the Catholics as French, in order to avail themselves of the national feeling and strengthen their cause in England; but there is no evidence that the Catholic Fathers, who represented three or four nationalities, were in any way acting as agents of France, and it is expressly stated in the October number of *L'Afrique Explorée et Civilisée*, p. 311, that before the conclusion of the Anglo-German treaty of July, 1890, Mwanga had invited France to assume the protectorate of Uganda, and that the invitation was declined. Mwanga appears, from all the indications, to wear as many faces as a civilized white man; but, once restored to the throne, he declared himself a Catholic and distributed his offices among the Catholics. The Protestants seemed to be beaten, when the British East Africa Company sent Capt. Lugard, in the year 1890, to take possession of the kingdom, in virtue of a pretended treaty which placed Uganda and its dependencies under the control of the Company. The advantage of numbers was with the Catholic party, estimated at 25,000, while the Protestants were but 4000.

Capt. Lugard arrived at the end of December, 1890, with a strong force, well-armed with rifles and machine guns. He remained for a year, administering the country under difficulties, and doing his best to promote good feeling by fighting the Mohammedans. Even this did not succeed, and at length, on the 24th of January, 1892, Capt. Lugard, however reluctantly, "felt it to be

his duty to appeal to arms for the maintenance of justice." This he did with complete success. The Catholics were routed, the missionary stations were destroyed and the Fathers took refuge with the Germans at Bukoba, on the western shore of the Victoria Lake. Mwanga and the native Catholics were driven out of Uganda into Buddu, and it is said that the king, under stress of circumstances, has become a Protestant.

Capt. Lugard, it must be noted, tells a somewhat different story, in his answer to the charges made against him by the Catholic priests through the French Ambassador in London. He declares that quarrels between the two factions were of common occurrence, but these were quite as much on the part of the Roman Catholics as the Protestants; that it was the murder of a Protestant by a Roman Catholic in the streets of Mengo, and the insolence of the Catholics in refusing to deliver the murderer up to justice, that brought about the war; and that it was the Catholic party, who entirely and of purpose provoked the war, "gratuitously taking the onus off his hands" He maintains that his own attitude was one of strict impartiality; yet he took the side of the Protestants in the struggle, just as he had previously made war upon the Mohammedans.

Through him the British East Africa Company obtained control of Uganda, but the scandal of this deplorable warfare between Christian teachers engaged in the work of civilization roused the British public, and the Government found itself forced to intervene and to assume the administration. Sir Gerald Portal has been appointed Commissioner. On the 8th of December, he

was at Zanzibar, where he was to be joined by the following gentlemen, who compose his staff:

Mr. E. J. L. Berkeley, of her Majesty's Consular Service, recently acting as Administrator of the Imperial British East Africa Company's territories in Africa ; Colonel F. W. Rhodes, D.S.O., 1st Royal Dragoons, Military Secretary to the Governor of Bombay ; Major E. R. Owen, Lancashire Fusiliers ; Captain M. R. Portal, North Lancashire Regiment ; Lieutenant Arthur, Rifle Brigade, at present serving in the local forces at Zanzibar.

Mr. Stanley was among those who undertook to enlighten the British public on the subject of the new "Imperial landed property," as he called it in a speech before the Constitutional Club, on the 7th of December. Uganda proper, he said, curves like a bent bow from the Alexandra Nile to the Victoria Nile at the northwest portion of the Great Nyanza, and is about 30,000 square miles in extent ; but the old Uganda empire, which is nearly alike in character and value, is about 90,000 square miles, and by far the most valuable portion of the territory which was included in the charter of the British East Africa Company.

He described the people as the finest native race in the whole continent from the Cape to Egypt.

The railroad from Mombasa on the Indian Ocean to the Victoria Nyanza would develop, he affirmed, an immense trade. The lake terminus of the road would become the Chicago of Africa.

In five years it would be more populous than Zanzibar, and its trade would amount to £6,000,000 a year. This picture of prosperity delighted his hearers, but

one of them, Mr. J. E. Cooke, asked for information concerning the religious disturbances.

Mr. Stanley answered him, as reported in the *London Times* of Dec. 8: "He had escorted two of the Roman Catholic missionaries from Lake Victoria to the sea, and he read those gentlemen perfectly. He heard them whisper and talk to one another; and it was his speech at that time which caused the Roman Catholics to be sent to Uganda.

"He had met Roman Catholic missionaries in many parts of the world; he had met good men at Bagamoyo in 1872, but those men were not the missionaries in Uganda.

"The missionaries in Uganda quarrelled; Capt. Lugard wished to put an end to that quarrelling and therefore he parted the kingdom into three. The points which had been raised by Mr. Cooke were small details. As an English officer Captain Lugard had done his duty."

These words, not less sincere than the professions of unbounded charity made by the apostle who converted King Mtesa in 1875, fitly close a shameful chapter in the history of the European dealings with Africa. England acquires, by whatever indirect methods, a coveted possession, and it is a positive gain to the cause of civilization that, under her recognized authority, Christians must hereafter learn to keep the peace in Uganda.

LIEUT. FREDERICK SCHWATKA.—Lieut. Schwatka, who had achieved celebrity as an Arctic explorer, died suddenly at Portland, Oregon, on the 2d of November, 1892, from an overdose of morphine.

He was born at Galena, Illinois, September 29, 1849, was graduated at the U. S. Military Academy in 1871, and served on garrison and frontier duty till 1877. He studied law and medicine, was admitted to the bar of Nebraska in 1875, and received his medical degree at Bellevue Hospital College, in 1876.

Accompanied by Mr. Wm. H. Gilder, Schwatka sailed for King William's Land, in 1878, to search for traces of Sir John Franklin's party. The search was successful; many of the skeletons of Franklin's men were discovered and buried; the grave of Lieut. John Irving, of the *Terror*, was found, and also a copy of the Crozier record.

The party made the longest known sledge journey, both in regard to time and distance, having been absent from its base eleven months and twenty days, and having travelled 3251 miles.

Once during this journey the thermometer marked -71° Fahr., and the average temperature for sixteen days was 100° below the freezing point.

Lieut. Schwatka afterwards explored the Yukon river, which he descended from its head-waters to its mouth.

In 1884 he resigned his commission in the army, and two years after he conducted the expedition sent to the Mt. St. Elias region by the proprietor of the *New York Times*.

On his return from Alaska he made his home at Rock Island, Illinois.

With his trained intelligence and his experience, his courage and great powers of endurance, he was fitted, as few men are, to do excellent work in Arctic travel;

and in the ordinary course of events there were many years of activity yet before him when he died.

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Investigations which show that Watling Island is the Guanahaní, called San Salvador by Columbus, and that it was the first island discovered and visited by the great Navigator. An address by Otto Neussel—Authentic Notices of the Famous River Marañon. By D. Marcos Jiménez de la Espada—The Treaties of Iyil. Memoir addressed to the Minister of State—The Factory of Rio del Oro. By D. Eduardo Lucini—The Coast of the Sahara, from Cape Bojador to Senegal—Report on the Progress of Geography. By D. Martín Ferreiro—Some Practical Observations on Colonization by the Marquis of Reinos.

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Programme of the subjects to be considered by the Geographical Section of the Congress of Learned Societies to meet on the 4th of April, 1893, at the Sorbonne—Progress of the Work on the Zuider Zee—M. Leitner on the Pamirs—Dr. A. Yersin's Itinerary from the Coast of Annam to the Mekong River—Determination of Geographical Positions in Annam—M. Maistre's Expedition to the Sudan—Capt. Binger in Africa—Wild People in Sumatra—The Peary Expedition—M. Emile Levasseur on the First Italian Geographical Congress—M. Hamy's Report on the Huelva

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Report on the Competition for the Annual Prize—
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On the Means of Promoting Ocean Exploration. Prof. A. Dohrn—On Tidal Observations in Italy and especially at Ischia: Prof. G. Grabowitz—On Phototopographical Surveys: Eug. P. Paganini—On the Progress in Geographical Astronomy in Determination of Latitudes, etc.: Dr. F. Guarducci—On the Advances made in Cartography: Lieut. Col.

A. Botto—On the Construction of the Map of Ethiopia by the General Staff: Capt. E. de Chaurand—On the Exploration of the Caves of Italy: Prof. A. Issel—Plan of a Geographical Station in the Antarctic Regions: Lieut. G. Roncagli—On the Utility of a *Catalogue Raisonné* of Maps for all Italy: Prof. G. Marinelli—On Cosmographical Globes: Prof. M. Fiorini—An Italian Dictionary of Place-Names: B. Bianchi—Letter of King Menelek II to the Society—Musical Observations in Eritrea: Capt. E. Fiori—Botanical Excursion to the Habab Country: Dr. A. Terracciano—Letters of A. de Brito and P. Centurione, with Notes by the Abbate P. Peragallo—Geography at the National Exhibition at Palermo: Prof. P. Pennesi—Girolamo Segato, Traveler, Cartographer and Chemist: Dr. A. Wolynski.